

## **SENTINEL™ Digital Video Recorder**

### **Solid State Mobile Digital Video Recorder for School Buses**

*SENTINEL™* is the next generation of mobile digital video recorder for school buses that combines solid state flash memory with the industry's latest video compression technology and Wi-Fi communications— to give you the easiest to use digital video recorder for your school bus fleet.

The system records video onto a solid state high capacity flash memory card – eliminating the hard drive and its associated failure rates. There are no spinning disks or heads to crash and nothing that will be damaged by vibration or shock.

Recording time of 60+ hours is exceptional. The *SENTINEL™* digital video recorder uses the latest h.264 video compression technology to deliver you high quality video. Combine that with VGA resolution and 20 frames per second: You get great resolution that is extremely memory efficient.

The *SENTINEL™* comes standard with a Wi-Fi communication system, which provides automatic download of video and optional GPS data when a bus is within a recognized Wi-Fi spot. This eliminates the need to find the bus to collect video and GPS data. An event marker button allows the bus driver to mark the time of an event.

The unit is easy to install and is virtually maintenance free. It even contains self-diagnostics and will let you know if it needs service. You are up and running with the safety and security of a digital video recorder in no time.

#### **Optional GPS**

GPS embeds speed, time and location into the video stream, allowing you to know where and how fast the bus travels. GPS data integrates into mapping and route optimizing applications.

#### **Optional Vehicle Information Sensor Pack**

Up to 8 bus signals can be monitored, including stop arm, door open and close, brakes lights, etc. The data is embedded into the video for exact time and location.

#### **Optional Student Tracking System**

The student tracking system allows school personnel to know who got on and off the bus when and where. Not only is there a student manifest, but also the student names can be superimposed onto the video as they enter and exit the bus.

***SENTINEL™*** – provides you quality video, high reliability, ease of use – all at a reasonable price.



# **SENTINEL™ Mobile Digital Video Recorder**

## **Specifications**

### **DVR Specification**

Recording Medium:	16GB SD card
Recording Channels:	2 channels
Video Resolution:	VGA
Video Compression:	h.264
Frame Rates:	20 fps
Recording Modes:	Endless loop
Audio:	Single stereo channel
Recording Time:	Over 10 days @ 7hours / day
Delayed Recording:	User selectable, default is 15 minutes
Digital Camera:	One or two

### **Casing**

Rugged custom design

### **Environmental**

Recording:	-30 deg C to +50 deg C
Standby:	-50 deg C to +60 deg C

### **Power Input**

125 Watts (150 Watt peak) PSU  
6-24V input range  
Intelligent shutdown controller  
Survives vehicle engine cranks  
Battery deep discharge prevention

### **Optional GPS Module**

GPS Chipset	SiRF Star III
Frequency	L1, 1575.42 MHz
Channels	20 channel all-in-view tracking
Sensitivity	-159 dBm
Antenna	Active patch antenna
Accuracy Position	10 meters, 2D RMS 5 meters, 2D RMS, WAAS enabled

### **Communications Module**

802.11b Wi-Fi communications module with high gain bus-mounted antenna

### **Safety & Mounting**

Designed for mounting on any school bus  
Screw-mounted bus unit  
Designed to meet all current bus standards  
Self-diagnostics

### **Bus Depot and Hot Spot Requirement**

Standard 802.11b Wi-Fi access point with network connection and high gain antenna

### **Transportation Department Software Application**

Web-based, secure user application  
Easy-to-use interface, integrates into school district network  
Archive video to DVD, email video to authorized personnel

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